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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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09/915,286

07/27/2001

Mark Hornick

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03/25/2004

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EXAMINER

TO, BAOQUOC N

ART UNIT

PAPER NUMBER

2172

DATE MAILED: 03/25/2004

2

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/915,286

Applicant(s)

HORNICK ET AL.

Examiner

Baoquoc N To

Art Unit

2172

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 27 July 2001.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-52 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-52 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
 - ☐ Certified copies of the priority documents have been received in Application No. _____.
 - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____.
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: _____.

DETAILED ACTION

1. Claims 1-52 are pending in this application.

Claim Rejections - 35 USC § 101

35 U.S.C. 101 reads as follows:

Whoever invents or discovers any new and useful process, machine, manufacture, or composition of matter, or any new and useful improvement thereof, may obtain a patent therefor, subject to the conditions and requirements of this title.

2. Claim 1-17 are rejected under 35 U.S.C. 101 because the claimed invention is directed to non-statutory subject matter. The API (Application Program Interface), which does not have interrelationship between the hardware and the software. Software prose.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

3. Claims 1-52 are rejected under 35 U.S.C. 103(a) as being unpatentable over Fong (US. Patent No. 6,704,747 B1).

Regarding on claims 1, 18 and 36, Fong teaches an application program interface for providing data mining functionality comprising:

A first layer providing an interface with an application program (col. 29, lines 30-32); and

A second layer implementing data mining functionality (SQL access a frame model database) (col. 28, lines 1-3), the second layer comprising:

A data mining object repository maintaining data mining metadata (stored schema metadata) (col. 7, lines 9-10);

A plurality of data mining project objects, each data mining project object containing data mining object created and used by a user (col. 11, lines 50-67),

A plurality of data mining session objects (query), each data mining session object containing data mining processing performed on behalf of a user (user created) (col. 28, lines 50-53),

A plurality of data mining tables, each data mining table mapping a table or a view in a database (col. 12, lines 14-15),

A plurality of data transformation objects (class), each data transformation object defining a computations or manipulations to be performed on data in the database (col. 28, lines 50-63),

A plurality of data mining models, each data mining model implementing conditions and decisions (col. 12, lines 15-25), and

Fong does not explicitly teach plurality of data mining result objects, each data mining results object generated as a result of scoring or analyzing a data mining model or an input dataset. However, Fong teaches “an entity is a collection of uniquely identified objects in a database. FIG. 4a is an illustration of entity relationship for HDB, NDB, and relational database (“RDB”) system for a sample patient entity with the attributes of HKID, Age, and Birthday and also a constrained method Seek_age” (col.

12, lines 20-25). This teaches the analyzing the database data. Therefore, it would have been obvious to one ordinary skill in the art the time of the invention was made to include the data mining analyzing the data into

Regarding on claims 2, 17 and 37, Fong teaches a plurality of data mining setting objects, each data mining settings object specifying a type of model to build and function model building algorithm specific parameters (col. 11, lines 55-67).

Regarding on claims 3, 18 and 36, Fong teaches the first layer is a client-side layer operable to execute on a client computer system (col. 6, lines 55-60).

Regarding on claims 4, 21 and 38, Fong teaches the second layer is server-side layer operable to execute on a server computer system (col. 29, lines 30-35).

Regarding on claims 5, 22 and 39, teaches the first layer and the second layer are implemented in the Java programming language.

Regarding on claims 6, 23 and 40, teaches the database comprises training data to be used to train the data mining models.

Regarding on claims 7, 24 and 41, Fong the database comprises test and evaluation data to be used to test and evaluate the data mining models (col. 11, lines 55-60).

Regarding on claims 8, 25 and 42, Fong teaches the database comprises scoring data to be used to score the data mining models (col. 7, lines 9-24).

Regarding on claims 9, 26 and 43, Fong teaches each data mining project object maintains a name space within which data mining objects are named (class) (col. 7, lines 9-24).

Regarding on claims 10, 27 and 44, Fong teaches a data mining project object may be shared among users (Class) (col. 7, lines 9-24).

Regarding on claims 11, 28 and 45, Fong teaches the data mining table objects are included in the data mining object repository (col. 7, lines 9-24).

Regarding on claims 12, 29 and 46, Fong teaches each data mining table includes a set of columns of data mining data and associated metadata (col. 7, lines 9-24).

Regarding on claims 13, 30 and 47, Fong teaches each data mining transformation object performs data performs data transformation on a data mining table, a data column in a data mining table, a data row in a data mining table, or a value in a data row or a data column in a data mining table (col. 7, lines 9-24).

Regarding on claims 14, 31 and 48, Fong teaches each data mining transformation object comprises metadata (col. 7, lines 9-24).

Regarding on claims 15, 32 and 49, Fong teaches each data mining setting object comprises metadata (col. 7, lines 9-24).

Regarding on claims 16, 33 and 50, Fong teaches each data mining model comprises metadata (col. 7, lines 9-24).

Regarding on claims 17, 34 and 51, Fong teaches comprises a plurality of schema view objects, each schema view object providing access to a data table in the data mining object repository (col. 8, lines 16-20).

Conclusion

4. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

Agrawal et al. (US. Patent No. 5,884,320) Patent date: 03/16/0999

Agrawal teaches the user interface to communicate with a user terminal and the mining interface which transforms a user query input into a required query language and returned result to the user interface. The API is the middle software use to transform the user request into a language that allow for data mining application. This would be a 103 (a) rejection.

Beck et al. (US. Patent No. 6,167,395) Patent date: 12/26/2000

Beck discloses in one of the embodiment that a data mining function adapted for minding the hard data and converting mined data into suitable code for applying to memory objects. Beck also disclose an API function provides appropriate interface for linking interaction-data system such as system 255-261 to IOM 253. This is also a 103 (a) rejection.

Contact Information

5. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Baoquoc N. To whose telephone number is (703) 305-1949 or via e-mail BaoquocN.To@uspto.gov. The examiner can normally be reached on Monday-Friday: 8:00 AM – 4:30 PM, EST.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, John Breene can be reached at (703) 305-9790.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (703) 305-3900.

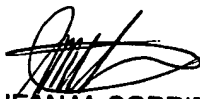
Any response to this action should be mailed to:
Commissioner of Patents and Trademarks
Washington, D.C. 20231.

The fax numbers for the organization where this application or proceeding is assigned are as follow:

(703) 872-9306 [Official Communication]

Hand-delivered responses should be brought to:
Crystal Park II
2121 Crystal Drive
Arlington, VA 22202
Fourth Floor (Receptionist).

Baoquoc N. To
March 17, 2004


JEAN M. CORRIELUS
PRIMARY EXAMINER